MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

PCA 0016 – COMPUTER APPLICATIONS AND PROGRAMMING

(Foundation in Engineering)

1 MARCH 2019
3.00 p.m. – 5.00 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 3 pages excluding the cover page with **FIVE** questions only.

2. Attempt **ALL** questions. Distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

Answer **ALL** questions.

Question 1: [20 marks]

a) i) Define the term "computer". [4 marks]

ii) Green computing involves reducing the electricity consumed and environmental waste generated when using a computer. List FOUR (4) strategies that helps to achieve this. [4 marks]

b) Mainframe and supercomputer are two categories of computer. Briefly explain what are they and give an example in which area are these computers being used? [4 marks]

c) Multimedia is the use of a computer to present and combine multimedia components with links and tools that let the user navigate, interact, create, and communicate. List down the FIVE (5) multimedia components. [5 marks]

d) What is a multimedia authoring software? Give TWO (2) examples of commonly used multimedia authoring software. [3 marks]

Question 2: [20 marks]

a) i) What is a pointing device and what is a pointer? [2 marks]

ii) List FOUR (4) examples of pointing devices. [4 marks]

b) Explain briefly the TWO (2) factors that affect the quality of photos taken with a digital camera. [2 marks]

c) Define impact and nonimpact printers. List down THREE (3) examples of these two types of printers. [8 marks]

d) An audio output device produces music, speech, or other sounds from a computer. List FOUR (4) activities that computer users will need to use a pair of speaker attached to their computer. [4 marks]

Continued...

Question 3: [20 marks]

a) i) What is an operating system? [1 mark]
ii) List down the THREE (3) categories of operating system and give TWO (2) examples for each category. [9 marks]

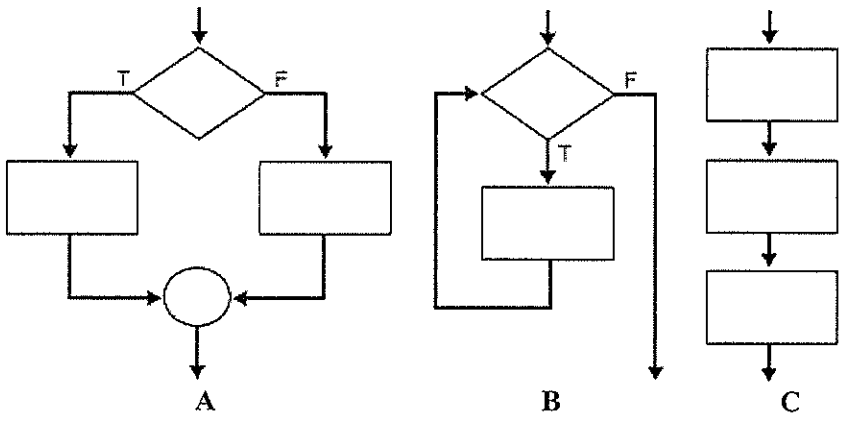
b) i) What is an application software? [1 mark]
ii) List down FIVE (5) application software used for communications. [5 marks]

c) Social media is the collective of online communications channels dedicated to community-based input, interaction, content-sharing and collaboration either using a computer or a mobile phone. List down FOUR (4) examples of prominent social media. [4 marks]

Question 4: [20 marks]

a) What are the two categories of programming languages? Give TWO (2) examples for each category. [4 marks]

b) i) Label the three control structures given in the diagram below. [3 marks]



c) Write a program (code segment) in Visual Basic to fill a list box with either odd or even numbers from 1 to 10 based on selection made on a combo box with options of *Even* and *Odd*. The selection is done on a combo box named *cboEvenOdd* and the output is displayed in a list box named *lstOutput*. Refer to **Figure Q4** on the next page. [13 marks]

Continued...

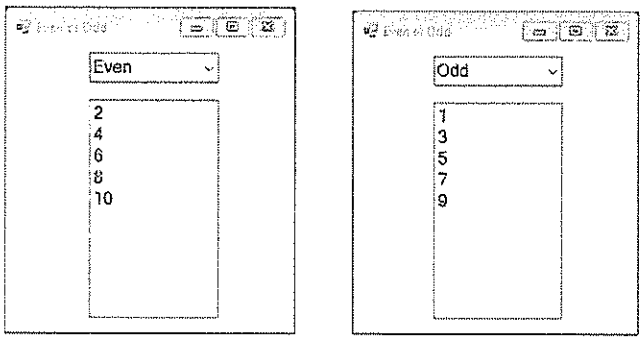


Figure Q4

Question 5: [20 marks]

a) i) What is a computer network? [2 marks]
ii) List down FOUR (4) advantages of using a computer network. [4 marks]

b) Briefly explain the following network communication standards:
i) Bluetooth.
ii) Radio Frequency Identification (RFID).
[4 marks]

c) You have the following hardware and devices:

- One desktop PC with Network Interface Card (NIC)
- One notebook/laptop with wireless access and NIC
- One 4-ports Wireless ADSL router/modem
- One smartphone with WIFI capability

i) Sketch out the layout of the connections of the above hardware and devices for both the PC, notebook/laptop and smartphone to access the internet through a telephone line using the ADSL modem. Use solid lines for wired connection and dotted lines for wireless connections. Label the components accordingly. [5 marks]

ii) For the connection from the notebook/laptop, which connection would you prefer? Give reasons for your answer. [1 mark]

d) List down and explain briefly FOUR (4) different types of broadband connections. [4 marks]

End of Page